<div align="center">REMARKS</div>

Substance of Interview

Applicant's representative Elliott Mason (Reg. No. 56,569) and his colleague Frank Gerratana (Reg. No. 62,653) thank the Examiner for the telephone interview on July 15, 2009. In accordance with MPEP Section 713.04, the substance of the interview is included herein. No exhibits were shown.

Regarding the 35 U.S.C. 103 rejection of claim 1, Applicant's representative asked questions (submitted in advance in writing) in order to obtain clarification of the particular parts of the cited portions of the references being relied upon to reject the claim.

The Examiner clarified how he believes the claim elements correspond to the cited portions. Applicant's representative requested an explanation of what would have prompted one of ordinary skill in the art to combine the teachings of references in the way required by claim 1 in light of the Examiner's clarification. The Examiner stated that the references were from the same field of endeavor and that the teachings were "combinable." The Examiner also stated that he would consider any argument as to why the teachings of the references would not have been combined as proposed by the Examiner.

Prior art Rejections

Claims 1-3, 12, 57-60, and 65-67 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi et al. (US 2002/0001314) in view of Famolari (US 2005/0053066) and Jeon et al. (An Integrated Services MAC Protocol for Local Wireless Communications, IEEE, February 1, 1998). Claims 4-8, 17-19, 28-36, 44-46, and 61-64 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, and Jeon in view of Rosengard et al. (US 2005/0063402). Claims 9-11, 49-56, and 68 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, Jeon, and Rosengard in view of Rakib et al. (US 2002/0015423). Claims 14-16 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, Jeon, and Rosengard in view of Gibson et al. (US 6,445,717). Claim 20-27 stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, Jeon, and Rosengard in view of Del Prado Pavon et al. (US

2004/0047351). Claim 37 stands rejected under 35 U.S.C. 103(a) as unpatentable over Yi,

Famolari, Jeon, Rosengard in view of Jiang et al. (US 6,765,885). Claims 38-40 stand rejected

under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, Jeon, Rosengard, and Jiang in view of

Henson et al. (US 2002/0131591). Claims 13, 41-43 and 47-48 stand rejected under 35 U.S.C.

103(a) as unpatentable over Yi, Famolari, and Rosengard, in view of Rakib (US 2002/0015423).

      Independent claims 1, 49, and 57

      Applicant submits that no combination of the references teaches or suggests at least the

feature of "encapsulating content from a plurality of the high level data units into a stream of

sub-frames," where "at least some of the low level data units each [contain] a plurality of the

pieces into which the encapsulated stream was divided, and at least some of the low level data

units [contain] boundary demarcation information indicating boundaries between the sub-frames

in the stream," as recited by each of claims 1, 49, and 57.

      On page 3 of the Office Action, the Examiner cites Yi, paragraph [0014], as disclosing

"at the MAC layer, encapsulating content from a plurality of the high level data units into a

stream of sub-frames." The Examiner points to Yi as disclosing "producing a payload unit by

segmenting and/or concatenating one or more service data units received from a higher layer,

generating a first PDU which includes a sequence number corresponding to the payload unit and

a second PDU which includes the payload unit, and transmitting the first and second PDUs to a

lower layer."

      Further, on page 4 of the Office Action, the Examiner cites Jeon, page 357, as disclosing

"at least some of the low level data units containing boundary demarcation information

indicating boundaries between the sub-frames in the stream." Jeon discloses a frame containing

a R-subframe, a T-subframe, and a margin. In the interview, the examiner regarded the frame as

equivalent to the "low level data unit" of these claims and the margin as "boundary demarcation

information indicating boundaries between the sub-frames in the stream."

      First, Applicant contends that the "margin" described by Jeon would not indicate

boundaries between the sub-frames in the stream that was divided into a plurality of pieces

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included in the low-level data units. Jeon introduces the term "margin" by describing that "there

is a margin between the last minislot of an R-subframe and the first tx-slot of the subsequent T-

subframe." Even if the margin were interpreted as "indicating" a boundary between a minislot

and a tx-slot or between an R-subframe and a T-subframe, there is nothing in Jeon to suggest that

the minislot and tx-slot or R-subframe and T-subframe would correspond to the portion of Yi

being interpreted as the sub-frames in the stream that was divided into a plurality of pieces

included in the low-level data units. If the R-subframe and T-subframe included in the frame

were interpreted as the "pieces" included in the "low-level data unit," such an interpretation

would not work because the margin would indicate the boundary between the "pieces" and not

between the "sub-frames," as these claims require.

       Second, Applicant contends that, even Jeon's "margin" could be interpreted as the recited

"boundary demarcation information," one of ordinary skill in the art would not have combined

the teachings of Jeon with the teachings of Yi in the manner proposed by the Examiner. In

particular, the Examiner points to Yi as teaching "encapsulating content… into a stream of sub-

frames." As noted above, Yi discloses a first and second PDU transmitted to a lower network

layer. In this regard, paragraph [0014] of Yi, cited by the Examiner, reads:

> To achieve the objects and in accordance with the purposes of the invention, as
> embodied and broadly described herein, a method of generating PDUs in a radio
> link control layer includes producing a payload unit by segmenting and/or
> concatenating one or more service data units received from a higher layer,
> generating a first PDU which includes a sequence number corresponding to the
> payload unit and a second PDU which includes the payload unit, and transmitting
> the first and second PDUs to a lower layer.

       However, Yi only discloses a mechanism by which the first and second PDUs are

transmitted to two different logical channels. In this regard, paragraph [0028] of Yi reads:

> The SN PDU and the LI+PU PDU get transmitted to a MAC layer through a pair of
> different logical channels. When a predetermined time period is elapsed after a SN
> PDU is transmitted through a specific logical channel, the corresponding LI+PU
> PDU is transmitted through another logical channel. A switching function is used in
> the logical channel in order to send both PDUs in different channels.

Thus, Yi describes a mechanism for transmitting a first and second PDU on two different logical channels. FIG. 4 of Yi also shows that the SN PDU and the LI+PU PDU are each transmitted on a different transport channel.

In contrast, Jeon, page 353, describes separating a frame into a reservation subframe (R-subframe) and a transmission subframe (T-subframe):

> **Fig. 1(a) shows an example of the uplink frame format. A frame consists of a reservation subframe (R-subframe) followed by an (uplink) transmission subframe (T-subframe). An R-subframe includes N_{MS} minislots, and a T-subframe contains N_{TS} transmission slots (tx-slots).**

The R-subframe contains minislots used to reserve a communication channel for a transmission slot contained in the T-subframe. Jeon, pages 353-354, reads:

> **Minislots are used for tx-slot(s) reservation. Any voice or data terminal having packets to send transmits a reservation request (REQ) at a minislot, according to an Aloha-type random-access scheme. A minislot consists of an overhead and a field conveying an REQ. Each REQ contains the source terminal identification number (SID), the class of reservation (COR, i.e., voice or data), and the number of tx-slots requested (NTSR). The "voice REQ" and the "data REQ" are the REQ's of which COR's are set to voice and data, respectively. A voice terminal can reserve only one tx-slot at a time for voice channel establishment (NTSR = 1 always), while a data terminal can reserve multiple tx-slots (NTSR ≥ 1) for packets waiting to be transmitted in its data buffer.**

Thus, the minislots in the R-subframe are used to reserve the communication channel for the transmission slots (tx-slots) in the T-subframe. As described above, a REQ in a minislot identifies reservations for transmitting the data of related tx-slots.

One of ordinary skill in the art would not have combined these teachings of Yi and Jeon as proposed by the Examiner because these teachings are directed to two mutually incompatible mechanisms. These claims call for encapsulating content from a plurality of the high level data units into a stream of sub-frames, and low level data units at least some of which contain boundary demarcation information indicating boundaries between the sub-frames in the stream. However, where the Examiner points to Yi as teaching encapsulating content into a stream of sub-frames, Yi teaches placing data into PDUs that are each transmitted on different logical channels. Where the Examiner points to Jeon as teaching boundary demarcation information indicating boundaries between the sub-frames in the stream, Jeon teaches sub-frames that operate

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on the same logical channel. A person of ordinary skill in the art would be unable to combine Jeon's R-subframe and T-subframe with Yi's SN PDU and LI+PU PDU without destroying Yi's scheme using different logical channels or destroying Jeon's scheme using a single logical channel. In the interview, the Examiner stated that the teachings of these references were "combinable." However, the Examiner did not give any reasons for asserting that the teachings were combinable, much less, reasons that would overcome the conflicts between Yi and Jeon described above.

Furthermore, as explained below, it is not sufficient to merely show that the teachings would have been "combinable" in theory. Instead, it is necessary to provide reasoning that would have prompted a person of ordinary skill in the art to combine the teachings in the way the claims require.

Standard of obviousness

In the interview, the Examiner appeared to suggest that for a valid 35 U.S.C. 103(a) rejection it is sufficient to show that the references are from the same field of endeavor and that the teachings are "combinable,", and that there is no need to specifically provide reasoning why a person of ordinary skill would have <u>combined</u> the <u>individual teachings</u> of those references in the manner required by each respective claim. However, Applicant submits that the lack of such reasoning leads to the conclusion that the Examiner's rejection of at least the claims discussed above is based on hindsight reconstruction, in light of the incompatibility of the references as described herein. The Examiner, in essence is using Applicant's claim as a template to reconstruct the invention by picking and choosing isolated disclosures from the prior art. This is impermissible under the law. For example, in *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992), the Federal Circuit stated:

> **It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991). The court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." (quoting *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600)**

The present rejections fit the court's description of what may not be done under § 103. The Examiner has merely listed certain limitations of Applicant's invention and then located isolated disclosures of those limitations. The law requires more than that.

In KSR, the Supreme Court even while stating that: "the Court of Appeals drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias," warned that: "a factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning."

> The Court of Appeals, finally, drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias. A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See *Graham*, 383 U. S., at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "'guard against slipping into the use of hindsight'" (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964)). Rigid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.

With respect to the genesis of the TSM requirement, the Court noted that although "As is clear from cases such as Adams, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known."

Applicant respectfully requests that the missing reasoning be provided for all claims that lack such reasoning (and in particular for claims 1, 49, and 57 to respond to Applicant's arguments above regarding the incompatibility of the references), or that the rejections be withdrawn.

Dependent claims 2-48, 50-56, and 58-68

These dependent claims stand rejected under 35 U.S.C. 103(a) as unpatentable over Yi, Famolari, and Jeon, in some cases in view of one or more additional references as shown above, however, no proper combination of Yi, Famolari, and Jeon and any of the additional references teaches or suggests the subject matter of the independent claims found to be lacking in Yi and Famolari. These dependent claims are properly dependent on a respective one of the independent claims, and are thus allowable therewith. These dependent claims add one or more further limitations, which are not presently relied upon to establish patentability. For that reason, and not because Applicant agrees with the Examiner, no rebuttal is offered to the Examiner's reasons for rejecting these dependent claims.

The required fee in the amount of $490 for the Petition for Extension of Time and $104 for excess claims is being paid on the Electronic Filing System (EFS) by way of deposit account authorization. Please apply any other charges or credits to deposit account 06-1050, referencing attorney docket 04838-0077001.

Respectfully submitted,

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